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| (51) International Patent Classification ⁷ : A23L 1/212, 2/00, A61K 7/48, 7/26 | A1 | (11) International Publication Number: WO 00/64278 (43) International Publication Date: 2 November 2000 (02.11.00) | | | | | | | | | | | | | | | | | | | | | |
| (21) International Application Number: PCT/US00/10112 (22) International Filing Date: 14 April 2000 (14.04.00) (30) Priority Data: <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">09/298,807</td> <td style="width: 40%;">23 April 1999 (23.04.99)</td> <td style="width: 30%;">US</td> </tr> <tr> <td>09/298,702</td> <td>23 April 1999 (23.04.99)</td> <td>US</td> </tr> <tr> <td>09/298,806</td> <td>23 April 1999 (23.04.99)</td> <td>US</td> </tr> <tr> <td>09/298,245</td> <td>23 April 1999 (23.04.99)</td> <td>US</td> </tr> <tr> <td>09/298,701</td> <td>23 April 1999 (23.04.99)</td> <td>US</td> </tr> <tr> <td>09/298,703</td> <td>23 April 1999 (23.04.99)</td> <td>US</td> </tr> <tr> <td>09/438,806</td> <td>12 November 1999 (12.11.99)</td> <td>US</td> </tr> </table> (71)(72) Applicant and Inventor: CHEN, Jau-Fei [US/US]; 1966 South 240 West, Orem, UT 84058 (US). (74) Agents: HULSE, Dale, E. et al.; Kirton & McConkie, 1800 Eagle Gate Tower, 60 East South Temple, Salt Lake City, UT 84111 (US). | | 09/298,807 | 23 April 1999 (23.04.99) | US | 09/298,702 | 23 April 1999 (23.04.99) | US | 09/298,806 | 23 April 1999 (23.04.99) | US | 09/298,245 | 23 April 1999 (23.04.99) | US | 09/298,701 | 23 April 1999 (23.04.99) | US | 09/298,703 | 23 April 1999 (23.04.99) | US | 09/438,806 | 12 November 1999 (12.11.99) | US | (81) Designated States: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> |
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| (54) Title: GINSENG BERRY HEALTH PRODUCTS (57) Abstract <p>The present invention relates to novel compositions of ginseng berry and other natural health promoting ingredients in a product suitable for human consumption and care. The compositions and methods of preferred embodiments of the present invention provide a natural vitamin containing composition for beverages, food products, dietary supplements and topical applications which provide the consumer with a refreshing, delicious, stimulating and/or healthful experience.</p> | | | | | | | | | | | | | | | | | | | | | | | |

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GINSENG BERRY HEALTH PRODUCTS

Field of the Invention

The present invention relates generally to the field of botanical and nutritional products for human consumption and care, and more particularly to botanical products comprising ginseng berry ingredients. Preferred embodiments of the present invention comprise novel compositions of ginseng berry and other beneficial ingredients prepared for human consumption and care.

BACKGROUND

The human physiological need for vitamins has been well established. Regular dietary consumption of vitamins is essential to good health. Various organizations and government agencies have published recommended quantities for vitamin consumption. One well known standard in the United States is the U.S. Recommended Daily Allowance (RDA) which recommends quantities for the daily intake of vitamins.

While the need for vitamins is well known, the average person fails to consume the recommended daily intake of vitamins through their normal diet. Often this is due to a busy work schedule that encourages the consumption of “fast food” that is high in fat and sugar.

content. For others, food rich in vitamin content may just not be readily available. Whatever the reason, many people do not consume enough vitamins in their daily diet.

Vitamin supplements have become common and are distributed in a variety of forms. Pills, capsules, elixirs, tablets, powders and other forms abound on the market as a means for obtaining a proper daily vitamin intake. For some, this is an acceptable source of vitamins, however, many people cannot consume vitamins in these forms. Children and the elderly are especially averse to consumption of these products. This may be due to sensitive gag reflexes or a strong distaste for the product's form or taste. Regardless of the reason, many people find concentrated vitamin supplements unpalatable and unacceptable as a source of daily vitamin intake.

Flavored drinks, especially fruit juice and fruit flavored drinks are a common source of refreshment and nutrition. Many fruit drinks contain naturally occurring vitamins. Others may be vitamin enriched through the addition of vitamin supplements. However, the addition of large amounts of vitamin supplements can adversely affect the taste and mouth feel of a drink. The addition of vitamin supplements can cause a metallic taste, a fish-like taste and distinctly non-fruit-like aromas. These are obviously unpalatable and undesirable in a fruit juice or flavored beverage product.

Common fruit drinks with high vitamin content are often highly acidic. For example, citrus fruits often have very high acidity. For those with sensitive stomachs and digestive tracts, this acidity can cause an upset stomach and aggravate existing problems such as ulcers and stomach reflux, thereby precluding consumption of those juices. Fruit
5 juices with high vitamin content, but less acidity, are preferred by these consumers.

Natural foods are popular among health-conscious consumers today. Many people prefer to get their vitamins and other nutrients in a "natural" way from naturally occurring sources. "Natural" vitamins are now in high demand. These are vitamins which are found in a product in its natural state without vitamin supplements or vitamin
10 "fortification." Many fruit and vegetable juices are known to have high concentrations of vitamins in their natural state and are often a preferred source of vitamins.

Among these natural vitamin containing juices, the health-conscious consumer often prefers a flavor which is unique or exotic and mildly sweet. This gives the perception of a healthy substance that is not high in calories. Unique and exotic tastes
15 are often preferred and perceived to be more refreshing so long as they can be associated with a natural fruit, vegetable, herb or other natural source.

The majority of Americans, and people of many other cultures, are accustomed to consuming stimulants as a part of their daily routine. In the United States, the stimulant of choice is currently caffeine. Millions of cups of coffee are imbibed each
20 morning to kick-start the day and throughout the day to provide a pick-me-up in the afternoon or evening. Cola drinks are also a source of caffeine which are consumed in large amounts. Other cultures prefer tea as a source of caffeine stimulant. The addictive nature of caffeine may explain its widespread acceptance and enormous consumption rate. Caffeine-containing drinks continue to be popular despite effects that are
25 detrimental to the body. Caffeine can be detrimental to the digestive tract as well as other systems. Caffeine's addictive effects and a user's psychological dependence on caffeine's stimulation make it difficult to abandon after continued use. An alternative drink which can provide gentle stimulation would be a welcome alternative to caffeine-containing drinks.

30 Herbal teas can be a source of caffeine-free stimulation and a source of vitamins and nutrients, however, prior art teas have demonstrated a difficulty in preserving the rich flavor of fruits in a dehydrated product. Often the flavor of a fruit is lost or substantially diminished when fruit products are converted to a dehydrated tea.

Freeze-drying is a process by which water in a fruit or other product is removed
35 by sublimation at a low temperature and pressure. Freeze-drying is known to help retain

nutrients in a product that is dehydrated. While freeze-drying may help preserve nutrients and some flavor, a significant amount of flavor is still lost in the process.

Human skin is a part of the body that often needs specific nutrients and care delivered directly to its surface. Human skin is extremely susceptible to the temperature and humidity extremes of our environment. However, when skin care products are properly used to counteract adverse environmental conditions, skin can remain healthy and beautiful under a variety of extreme environmental conditions. The environmental factors that most often affect the skin adversely are ultraviolet radiation and humidity.

Ultraviolet radiation varies with time of day, from day to night, with seasons of the year and weather conditions. The geographic region where one lives and the climate will also affect the amount of radiation to which one's skin is exposed. The sun's rays can dry skin through direct moisture loss or through the effects of radiation on the skin which may cause tanning and burning as well as moisture loss.

Skin may also face adverse conditions in the workplace where excessive temperatures or low humidity may harm skin. Exposure to chemicals may also remove moisture from the skin causing damage and actual skin chafing and loss if not treated properly.

Consequently, a mild skin moisturizer that nourishes the skin with natural ingredients and that can be repeatedly applied to the skin is beneficial in areas where skin is particularly susceptible to environmental damage.

In addition to environmental factors, skin must also be properly nourished. Maintaining healthy skin requires maintenance of proper moisture in the skin as well as delivery of essential vitamins to the skin. Vitamins may be consumed in the diet or may be applied directly to the skin.

For some people, oral consumption of vitamin C, especially in large doses, can have detrimental side effects ranging from mouth irritation to overdose. Yet large doses are sometimes considered beneficial to provide the skin with an effective amount of vitamin C. Vitamin C promotes collagen synthesis through its free radical scavenging attributes and its enzyme reactions which, in turn, promotes wound healing and skin health. Vitamin C is also toxic to many cancer cells including melanoma and has been found to catalyze the immune reaction to viral and bacterial infections.

Natural skin care products and remedies are popular among health-conscious consumers today. Many people prefer to enhance their appearance and health with vitamins and other nutrients in a "natural" way from naturally occurring sources. "Natural" products including natural vitamins are now in high demand. These are vitamins which are found in a product in its natural state without vitamin supplements

or vitamin "fortification." While fruit and vegetable juices are known to have high concentrations of vitamins in their natural state and are often a preferred source of vitamins for internal consumption, many natural fruit and vegetable products are largely overlooked as a topical skin application.

5

SUMMARY OF THE INVENTION

Preferred embodiments of the present invention provide a completely natural and refreshing product which contains many essential vitamins, minerals and amino acids as well as the benefits of selected herbs and royal jelly. An unique or exotic flavor is also provided through the use of ginseng berry ingredients. Preferred embodiments of the present invention comprise ginseng berry or ginseng berry extracts which may be combined with other natural or herbal ingredients to form a product for human consumption or care which provides mental and physical stimulation as well as other health benefits.

Embodiments of the present invention may be prepared for human consumption as beverages, food products, dietary supplements and other food and drink products or they may be prepared as topical applications for the skin. Preferred embodiments of the present invention may comprise ginseng berry extracts in liquid form, powders created from dehydrated ginseng berries, whole ginseng berries in freeze-dried, dehydrated or other forms or other ginseng berry derivatives. These ginseng berry products may be combined with natural herbs or other health promoting ingredients.

Accordingly, some embodiments of the present invention provide a food or drink product with a unique or exotic flavor.

Some embodiments of the present invention provide a food or drink product comprised of natural fruit ingredients with naturally occurring vitamins.

In addition, some embodiments of the present invention provide a source of vitamins, amino acids, minerals, herbs and/or other nutrients for those who are averse to consuming tablets, capsules and similar items.

Also some embodiments of the present invention provide a food or drink product that will naturally stimulate the mind and body.

Furthermore, some embodiments of the present invention provide a food or drink product that will not upset a sensitive stomach.

Some embodiments of the present invention provide a food or drink product that has lower acidity than common citrus fruit juices.

Some embodiments of the present invention provide a naturally vitamin-rich food or drink product with no artificial sweeteners.

Some embodiments of the present invention provide an alternative to caffeine-containing beverages which can stimulate the consumer without the addictive or health-repressing qualities of caffeine.

Also some embodiments of the present invention provide a product and method
5 which can deliver natural vitamins, skin nutrients and skin protectants to the skin in a topical application that nourishes and moisturizes the skin naturally.

Some embodiments of the present invention deliver natural vitamins to the skin.

Furthermore, some embodiments of the present invention deliver natural fruit and vegetable extracts to the skin so that the skin may benefit from natural vitamins,
10 emollients and other healthful ingredients.

Some embodiments of the present invention deliver natural and healthful herbs to the skin.

In addition, some embodiments of the present invention moisturize the skin.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

15 The present invention may be embodied in other specific forms without departing from its spirit or essential characteristics. The described embodiments are to be considered in all respects only as illustrative, and not restrictive. The scope of the invention is, therefore, indicated by the appended claims, rather than by the foregoing description. All changes which come within the meaning and range of equivalency of the
20 claims are to be embraced within their scope.

The present invention is directed towards a ginseng berry composition for human consumption or skin care. Although the ginseng root is sometimes used as an herbal supplement, the ginseng berry has been overlooked as a food product or medication due, at least partially, to its high seed content. Ginseng berries contain a large number of
25 seeds which make up a large percentage of the berry's volume. These seeds must typically be removed in order to make a palatable food product or smooth topical application.

Laboratory analysis of ginseng berries reveals the presence of natural and essential vitamins. The following Table 1 gives the result of a laboratory analysis of the
30 essential vitamins and ingredients found in the ginseng berry.

Table 1

| | | |
|---|---------------|----------------------------|
| | Riboflavin | 171.9 ug / gram of product |
| | Vitamin A | 109 IU |
| 5 | Vitamin E | 1.5 IU |
| | Beta Carotene | 16.9 IU |

Advantageously, ginseng berry extract also acts as an anti-oxidant. Laboratory analysis reveals that one gram of ginseng berry contains 1.4 times more antioxidant than 10 mg. of Vitamin C.

10 Modern machinery may be used to produce juice from ginseng berries, however a preferred method of the present invention comprises a manual process. Whole ginseng berries are crushed in a press thereby removing the majority of juice. Seeds are then removed from the juice by filtration through a coarse screen. When the final product will be a juice or beverage, the juice may be further filtered in a 0.2 micron micro-filtration system to remove solids. When solid products or thicker fluids such as creams, lotions, and salves or shakes and teas are to be made, the micro-filtration step may be omitted.

After juice has been extracted, it may be blended with other natural ingredients which add flavor, sweetness and other nutritional and physiological benefits.

20 Consumption of natural herb products may also increase health and vitality. The effects of various herbs and plant products are beneficial to the nervous, digestive and circulatory systems as well as other physiological functions. Herbs which, when consumed or applied topically, are beneficial to one's health and vitality may be considered to be "health promoting agents." The combination of herbal ingredients with vitamin-rich ginseng berry and its extracts offers the health advantages of natural vitamins and herbs in a palatable food or drink product or healthy and invigorating skin application.

30 Ginseng root also has beneficial physiological effects. It is believed to help regulate blood pressure and increase the body's resistance to adverse physical, chemical and biological influences. Ginseng root can stimulate physical and mental activity and protect against the adverse effects of mental and physical stress. It may also improve concentration and stimulate brain cells. Ginseng root may be considered to be a natural health promoting agent.

35 Royal jelly is a natural substance produced by worker bees as a food source for the queen bee, and has beneficial physiological effects when consumed by humans as well. It contains vitamins A, C, E and numerous B vitamins. It also contains minerals and many amino acids necessary for the body. Royal jelly is believed to increase vitality

and longevity in humans. Royal jelly may also be considered a natural health promoting agent. In the prior art, royal jelly is also distributed in capsule form making it unpalatable to those averse to capsules.

5 Preferred embodiments of the present invention may combine the juice of ginseng berries with herbal stimulants and other natural health promoting agents as well as other fruit juices to create a food, drink, topical application or other product that is pleasurable to consume and which provides a great variety of ingredients essential to health and vitality.

10 Preferred embodiments of the present invention may be created from products made from ginseng berry juice. Ginseng berry juice may be concentrated by known techniques to form a concentrated extract or syrup. This concentration may be performed on the pure juice of the ginseng berry or it may be performed after mixing the juice or juices with natural health promoting ingredients or other ingredients. The concentrated extract or syrup may then be diluted with water to return it to a juice state. The syrup
15 may also be used to create other products such as, but not limited to, candies, jellies or fruit leather. When more fiber or texture is desired, the final filtration step of the juice making process using a 0.2 micron filter may be omitted or replaced with a step which utilizes a coarser filter. This is preferred for fruit leather, some candies and some topical applications. Alternatively, fiber and texture producing ingredients may be added as
20 needed.

A powder may also be derived from the ginseng berry or its extracts either before or after addition of other ingredients. Once the ginseng berry has been peeled, the meat is crushed and squeezed after which the seeds are removed by filtration and centrifuge. This creates a slurry solution which can be further processed into a powder. This slurry
25 may also be blended or otherwise used for fruit leather, jelly or candy products as well as topical applications.

Under one method of the present invention the slurry solution is dried by a hot air drying method wherein the slurry is placed on a conveyor belt exposed to extremely hot air. Once dry, the product is ground to a specific size.

30 Another drying method used to create a powder of the present invention employs a freeze-drying method wherein the slurry is frozen and then dehydrated in a vacuum. The resulting dehydrated product is then ground to the desired size.

In yet another, alternative drying method for producing the powdered products of the present invention, the slurry solution is further filtered using a 0.2 micron micro-
35 filtration system to produce a liquid product. All substantial particles of the fruit and seeds are thereby removed. The liquid product is then spray-dried to powder form. In

the spray-drying process the liquid product is sent to an atomizer which uses a nozzle or centrifugal rotating wheel to atomize the liquid product into a spray. Droplets created by the atomizer contain both water and ginseng berry solids. This atomized spray is sent to a drying chamber with a controlled temperature and air flow. Atomized droplets are kept
5 in contact with the heated air until the desired moisture content is achieved. During this process, the droplets become particles which are subsequently separated from the air stream. The resulting particles may then be ground to a finer powder if desired.

Regardless of the drying process used, the powder may be blended with other ingredients to create novel, vitamin-rich and stimulating food and health care products
10 of the present invention.

A generalized formula for a food or drink product of the present invention comprises ginseng berry juice combined with one or more natural health promoting ingredients. Natural health promoting ingredients may include, for example and not by way of limitation, ginseng root, Chinese white flower, purslane herb, cinnamon bark, gou
15 ten, cassia tora seed, mint herb, licorice root, silver flower, sorbitol, lycium fruit, liriopoe root, schizandra seed, forsythia fruit, japanese sophora, Chinese dodder, marsh parsley, Chinese lovage, angelica root, paris herb, anise seed, ginger root, imperate root, poria (mushroom powder), orange peel, cornel fruit, bamboo leaf, hawthorn berry, eucomia bark and lemon extract. The formula may also contain other ingredients to promote
20 health or adjust flavor.

Other ingredients, given by way of example and not by limitation may be sweeteners, flavorings, or preservatives. The formula may also contain juices from other fruits, vegetables or herbs to provide vitamins or other health promoting ingredients or simply to adjust flavor or provide a variety of flavors. Juices found to be desirable,
25 especially by those with sensitive digestive tracts, are passion fruit, mango, guava and melons. However, citrus fruits and other tropical fruits may be equally palatable and nutritious.

In the production of a preferred embodiment of the present invention using whole, freeze-dried ginseng berries, the berries are preferably harvested in the first or second
30 week of September when the berries are the ripest. The berries are then washed and cleaned and put through a freeze-drying process.

At the operating vacuum pressure of the freeze-drying process water cannot exist as a liquid. It exists as ice or vapor and sublimates directly from ice to vapor. As temperatures are increased at a controlled rate the water in the ginseng berries sublimates
35 directly to vapor as it leaves the fruit. Refrigeration panels within the freeze-drying chamber operate at a temperature around -25 degrees Fahrenheit. As vapor is forced off

the fruit by increasing temperatures, the vapor is drawn toward the colder refrigeration panels where it is converted back to solid form through deposition. A balanced sublimation-deposition process maintains proper vacuum in the chamber.

5 Careful control of pressure and temperature are essential to the freeze-drying process. If temperatures are increased too quickly, the refrigeration panels may not keep up with the vapor-generating sublimation process and pressure in the chamber may raise thereby allowing liquid water to form in the product. This can be avoided by carefully controlling the rate of temperature increase.

10 Once the ginseng berries have been properly freeze-dried, they can be further processed with other ingredients to enhance their beneficial value or they may be used directly in embodiments of the present invention.

15 In some embodiments of the present invention the freeze-dried ginseng berries are further processed by coating methods and other combination techniques to enhance their nutritional value and improve or vary their taste. A surficial coating over the ginseng berry has been found to improve flavor retention of the berry itself as well as enhance that flavor with the flavor of the coating product. A cactus fruit coating has been found to have superior flavor preservation characteristics and provides a tasteful and exotic flavor. However, other fruit-based coatings have been found to work well too.

20 Some embodiments of the present invention comprise a cactus fruit extract. A preferred genus of cactus is the *Cereus* genus with several preferable species such as *Cereus grandiflorus*, *Cereus giganteus* and *Cereus thurberi*. Another preferred genus is the *Opuntia* which includes many preferred species including *Opuntia strigil*, *Opuntia basilaris*, *Opuntia rufida*, *Opuntia phaeacantha*, *Opuntia engelmannii*, *Opuntia erinacea*, *Opuntia humifusa*, *Opuntia phaeacantha*, *Opuntia chlorotica*, *Opuntia polycantha*, *Opuntia violacea*, *Opuntia spinosacca*, *Opuntia lindheimeri* and *Opuntia macrorhiza*. The
25 species within the *Opuntia* genus of cactus have relatively flat, oval-shaped pads, similar to the leaves or branches of a bush, which may or may not have spines thereon. Cactus fruit or "pears" generally grow around the perimeter of the oval-shaped pads on these cacti. In the practice of the present invention, extract is derived from the cactus fruit. In
30 some presently preferred embodiments, extracts may also be derived from the cactus pads or stems.

35 Cactus fruit grow in several varieties with varying color, seed content, sugar content and size. Colors range from green and yellow to purple, orange and red. Fruits generally range in size from 110 grams to 150 grams. Seed content, by weight, typically ranges between 2 and 4 grams per fruit while sugar content generally ranges between 11% and 16%. Cactus fruit used in a preferred embodiment of the process and product

of the present invention are red with average to high sugar content obtained from the *Cereus Grandiflorus* species.

Laboratory analysis of the extract from cactus fruit used for the preferred embodiment of the beverage of the present invention shows a high concentration of essential vitamins. The following Table 2 gives the result of a laboratory analysis of the cactus juice squeezed from the *Cereus Grandiflorus* cactus used in a preferred embodiment of the present invention.

Table 2

| | |
|---------------------|----------------------------|
| Thiamin | 116.6 ug / gram of product |
| Riboflavin | 221.9 ug / gram of product |
| Vitamin C | 8.35 mg / gram of product |
| Vitamin A | 309 IU |
| Vitamin E | 1.36 IU |
| Vitamin D3 | 120 IU |
| Beta Carotene | 16.6 IU |
| Cyanocobalamine B12 | 91 mg / gram of product |

Cactus fruit extract has also been found to be an effective anti-oxidant. Laboratory analysis reveals that one gram of cactus fruit contains 7 times more antioxidant than 10mg of Vitamin C. The results of these tests prove that cactus fruit juice is an excellent source of vitamins.

In one preferred method of enhancing the freeze-dried ginseng berries, a liquid coating is applied to the freeze-dried berries. This may take place immediately after freeze-drying or at a later time. Several techniques may be used to accomplish this step. The berries may be kept frozen or may be re-frozen at which point the berries are sprayed with a solution which freezes on the surface of the berries. This solution may then be freeze-dried on the berry where it will remain as a coating. Another technique for applying a coating to the freeze-dried ginseng berries involves a dehydration process wherein the freeze-dried berries may be frozen or may be allowed to thaw. A solution is then sprayed onto the berries after which the berries and their coating solution are dehydrated thereby forming a solid coating on the berries. Dehydration of the coating may be by a freeze-drying process or other dehydration methods.

The dehydration process may incorporate a number of known methods, however, a preferred process utilizes a conveyor belt which passes through an oven. The berries

are sprayed as they pass along the conveyor belt and are immediately transported along the belt to the oven where the coating is dehydrated to a substantially solid coating which will adhere and remain on the berries.

5 In an alternative process, the berries may be sprayed with a wetting solution which may consist of water alone, water with additives or some other solution. Once wetted, the berries are coated with a powder supplement which adheres to the berries by virtue of the wetting solution or the combination of wetting solution and powder. Powder coating may be achieved using any of several known techniques including, but not limited to, dusting and immersion in powder. The powder-coated berries may then be
10 oven-dried, freeze-dried or air-dried as required for preservation and packaging.

In addition to coating the whole, freeze-dried ginseng berries, additional ingredients may be added to the resulting food product, beverage or topical application by other methods. Various herbs and other ingredients may be combined with the ginseng berries to improve health benefits, flavor or other aspects. These ingredients may
15 be added as part of a coating, coating solution, coating powder or mixed in packaging.

Embodiments comprising freeze-dried ginseng berries are ideal for making tea beverages and may be packaged as such with or without additional ingredients. When an instant tea is preferred, the freeze-dried ginseng berries of the present invention may be ground to a powder form along with other ingredients so that it may more readily
20 dissolve. This powder may be packaged in tea bag form or it may be directly mixed and dissolved into a tea beverage.

Topical application embodiments of the present invention combine extracts of ginseng berries with herbal supplements and stimulants and/or other natural health promoting ingredients to create an application that has pleasurable sensory effect on the
25 user and which provides a great variety of ingredients essential to health and vitality. The novel topical application methods and compositions of the present invention allow users to apply natural vitamins, anti-oxidants and emollients directly to the skin.

A generalized formula for the products of some embodiments of the present invention comprises ginseng berry combined with fruit extract and/or one or more natural
30 health promoting ingredients. Natural health promoting ingredients may include, for example and not by way of limitation, agnus castus (*vitex agnus-castus*), agrimony (*agrimonia eupatoria*), anise (*pimpinella anisum*), arjuna (*terminalia arjuna*), arnica (*arnica montana*), asafoetida (*ferula assa-foetida*), astragalus (*astragalus membranaceus*), avens (*geum urbanum*), bay laurel (*laurus nobilis*), beleric myrobalan (*terminalia belerica*), betony (*stachys officinalis*), bilberry (*vaccinium myrtillus*), bistort (*polygonum bistorta*), black cohosh (*cimicifuga racemosa*), blackcurrant (*ribes nigrum*), black haw

(*viburnum prunifolium*), bogbean (*menyanthes trifoliata*), boldo (*peumus boldus*), boneset (*eupatorium perfoliatum*), buchu (*barosma betulina*), bugleweed (*lycopus virginicus*), burdock (*arctium lappa*), calendula (*calendula officinalis*), calumba (*jateorhiza palmata*), cardamom (*elettaria cardamomum*), cayenne (*capsicum frutescens*),
5 cerasee (*momordica charantia*), chiretta (*swertia chirata*), cinchona (*cinchona*), cinnamon (*cinnamomum verum*), clove (*eugenia caryophyllata*), codonopsis (*codonopsis pilosula*), coltsfoot (*tussilago farfara*), comfrey (*symphytum officinale*), common plantain (*plantago major*), cornsilk (*zea mays*), cowslip (*primula veris*), crampbark (*viburnum opulus*), damiana (*turnera diffusa*), dandelion (*taraxacum officinale*), devil's claw (*harpagophytum procumbens*),
10 echinacea (*Echinacea* spp.), eggplant (*solanum melongena*), elder (*sambucus nigra*), elecampane (*inula helenium*), ephedra (*ephedra sinica*), eucalyptus (*eucalyptus globulus*), evodia (*evodia rutaecarpa*), evening primrose (*oenothera biennis*), eyebright (*euphrasia* spp.), fennel (*foeniculum vulgare*), fumitory (*fumaria officinalis*), galangal (*alpinia officinarum*), garlic (*allium sativum*), gentian (*gentiana lutea*), ginger (*zingiber officinale*),
15 ginkgo (*ginkgo biloba*), goat's rue (*galega officinalis*), goldenrod (*solidago vigaurea*), hanbane (*hyoscyamus niger*), hops (*humulus lupulus*), horsemint (*monarda punctata*), Indian gooseberry (*emblica officinalis*), jamaica dogwood (*piscidia erythrina*), java tea (*orthosiphon aristata*), jujube (*ziziphus jujuba*), kantakari (*solanum xanthocarpum*), lavender (*lavandula officinalis*), lapacho (*tabebuia* spp.), lemon (*citrus limon*),
20 lemon balm (*melissa officinalis*), licorice (*glycyrrhiza glabra*), linden (*tilia*), lobelia (*lobelia inflata*), lycium (*lycium chinense*), manioc (*manihot esculenta*), meadowsweet (*filipendula ulmaria*), milk thistle (*carduus marianus*), muira puama (*liriosma ovata*), mullein (*verbascum thapsus*), myrrh (*commiphora molmol*), nettle (*urtica dioica*), oats (*avena sativa*), passionflower (*passiflora incarnata*), patchouli (*pogostemon cablin*),
25 picrorrhiza (*picrorrhiza kurroa*), prickly ash (*zanthoxylum americanum*), purslane (*protulaca oleracea*), rehmannia (*rehmannia glutinosa*), rosemary (*rosmarinus officinalis*), sarsaparilla (*smilax* spp.), schisandra (*schisandra chinensis*), skullcap (*scutellaria lateriflora*), slippery elm (*ulmus rubra*), soapwort (*saponaria officinalis*), spiny restharrow (*ononis spinosa*), squaw vine (*mitchella repens*), sweet basil (*ocimum basilicum*),
30 tea tree (*melaleuca alternifolia*), tree lungwort (*lobaria pulmonaria*), turmeric (*curcuma longa*), thyme (*thymus vulgaris*), vervain (*verbena officinalis*), white willow (*salix alba*), winter cherry (*physalis alkekengi*), withania (*withania somnifera*), wormwood (*artemisia absinthium*), yarrow (*achillea millefolium*), yellow dock (*rumex crispus*) as well as vitamins, minerals and amino acids. The formula may also contain
35 other ingredients to promote health or adjust flavor.

Other ingredients, given by way of example and not by limitation may be sweeteners, flavorings, or preservatives. Natural fruit flavorings found to be especially palatable are raspberry, strawberry, pineapple, apple, lemon, orange and citrus flavors. Other natural flavors found to be preferable are mint leaf, peppermint and cinnamon.

5 Other tea leaves, especially ginseng leaf can be combined with ginseng berry to make a refreshing and revitalizing beverage. The formula may also contain ingredients from other fruits, vegetables or herbs to provide vitamins or other health promoting ingredients or simply to adjust flavor or provide a variety of flavors. Fruit ingredients found to be desirable, especially by those with sensitive digestive tracts, are passion fruit, mango,

10 guava and melons. However, citrus fruit ingredients and ingredients from other tropical fruits may be equally palatable and nutritious. A preferred embodiment of the present invention comprises extracts of cactus fruit juice.

The following tables and examples further illustrate the ingredients currently used in some presently preferred embodiments.

EXAMPLE 1

A composition for making tea within the scope of the present invention is prepared by using the following ingredients in amounts given by weight percentage:

| | |
|-----------------------------------|-----------|
| Whole freeze-dried ginseng berry | about 75% |
| 20 Cactus juice extract (coating) | about 13% |
| Wild Honey | about 10% |
| Royal Jelly | about 2% |

The cactus juice, honey and royal jelly coating is applied by spraying and oven drying.

EXAMPLE 2

A composition for making tea within the scope of the present invention is prepared by using the following ingredients in amounts given by weight percentage:

| | |
|-------------------------------------|--------------|
| 30 Whole freeze-dried ginseng berry | about 55% |
| American ginseng root extract | about 10% |
| Passion fruit extract | about 20% |
| honey | about 15% |
| sodium benzoate | about < 0.1% |

The above formulas provide a natural, vitamin rich, herbally enhanced and/or royal jelly fortified tea beverage with a unique and exotic taste which can be consumed by those who are tablet and capsule averse and which can be packaged so as to make it convenient for consumers of almost any lifestyle. Preferred embodiments also provide a gentle herbal stimulant which can be used as a healthier alternative to caffeine.

EXAMPLE 3

A powdered food supplement within the scope of the present invention is prepared by using the following ingredients in amounts given by weight percentage:

| | | |
|----|----------------------|-----|
| 10 | ginseng berry | 15% |
| | cactus fruit | 15% |
| | mint | 7% |
| | silver flower | 7% |
| | chuan xiong root | 7% |
| 15 | golden bell fruit | 7% |
| | Chinese catnip | 7% |
| | bell flower root | 7% |
| | American lovage root | 7% |
| | angelica root | 7% |
| 20 | licorice | 4% |
| | bamboo leaf | 4% |
| | burdock seed | 3% |
| | reed root | 3% |

EXAMPLE 4

A powdered food supplement within the scope of the present invention is prepared by using the following ingredients in amounts given by weight percentage:

| | | |
|----|-------------------------|-----|
| | ginseng berry | 10% |
| | cactus fruit | 20% |
| 30 | ginseng root | 7% |
| | atractylodis root | 7% |
| | poria (mushroom powder) | 7% |
| | licorice | 7% |
| | pinellia root | 7% |
| 35 | orange peel | 7% |
| | cinnamon bark | 7% |

| | |
|--------------|----|
| fennel seed | 7% |
| amonium seed | 7% |
| mint | 7% |

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EXAMPLE 5

A beverage within the scope of the present invention was prepared by mixing the following ingredients in amounts given by weight percentage:

| | | |
|----|---------------------|-----|
| | ginseng berry juice | 25% |
| | fruit juice | 35% |
| 10 | cactus fruit juice | 20% |
| | Wild Honey | 15% |
| | Royal Jelly | 5% |

EXAMPLE 6

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A beverage within the scope of the present invention was prepared by mixing the following ingredients in amounts given by weight percentage:

| | | |
|----|--------------------------|-----|
| | ginseng berry juice | 37% |
| | American ginseng extract | 10% |
| | fruit extract | 37% |
| 20 | honey | 15% |
| | sodium benzoate | <1% |

EXAMPLE 7

25 A replenishing skin masque within the scope of the present invention was prepared by mixing the following ingredients in amounts given by weight percentage:

| | | |
|----|--|-------|
| | Ginseng (Panax Ginseng) Berry Extract | 11% |
| | Water | 28.9% |
| | SD Alcohol 40B | 10% |
| 30 | Glycerin | 7% |
| | Hybrid Sunflower (Helianthus Annuus) Oil | 6% |
| | Polyacrylamide | 5% |
| | C13-14 Isoparaffin | 5% |
| | Laureth-7 | 5% |
| 35 | Cyclomethicone | 5% |
| | Grape (Vitis Vinifera) Seed Extract | 3% |

| | | |
|----|--|------|
| | Ginseng (Panax Ginseng) Root Extract | 2% |
| | Avocado (Persea Gratissima) | 1% |
| | Cucumber (Cucumis Sativus) | 1% |
| | Jasmine (Jasminum Officinale) | 1% |
| 5 | Orange (Citrus Aurantium Dulcis) Peel | 1% |
| | Flowery Knotweed (Polygonum Aviculare) | 1% |
| | Hibiscus Sabdariff | 1% |
| | Mulberry (Morus Alba) Leaf | 1% |
| | Riboflavin (Vitamin B2) | 1% |
| 10 | Tocopheryl Acetate (Vitamin E Acetate) | 1% |
| | Niacin (Vitamin B3) | 1% |
| | Pantothenic Acid (Provitamin B5) | 1% |
| | Disodium Edta | 0.1% |
| | Phenoxyethanol | 0.2% |
| 15 | Methylparaben | 0.2% |
| | Butylparaben | 0.2% |
| | Ethylparaben | 0.2% |
| | Propylparaben | 0.2% |

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EXAMPLE 8

A body wash within the scope of the present invention was prepared by mixing the following ingredients in amounts given by weight percentage:

| | | |
|----|---------------------------------------|-----|
| | Ginseng (Panax Ginseng) Berry Extract | 5% |
| | Water | 48% |
| 25 | Decyl Glucoside | 6% |
| | Aloe Barbadensis Gel | 6% |
| | PEG-120 Methyl Glucose Dioleate | 6% |
| | Ammonium Laureth Sulfate | 5% |
| | Disodium Cocoamphodiacetate | 4% |
| 30 | Grape (Vitis Vinifera) Seed Extract | 1% |
| | Chrysanthemum Coccineum | 1% |
| | Cucumber (Cucumis Sativus) Sage | 1% |
| | Kiwi (Actinidia Chinensis) | 1% |
| | Lemon (Citrus Medica Limonum) | 1% |
| 35 | Rose (Rosa Damascena) | 1% |
| | White Water Lily (Nymphaea Alba) | 1% |

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| | | |
|----|--|------|
| | Riboflavin (Vitamin B2) | 1% |
| | Tocopheryl Acetate (Vitamin E Acetate) | 1% |
| | PEG-7 Glyceryl Cocoate | 1% |
| | Cocamidopropyl Betaine | 1% |
| 5 | Fragrance | 0.2% |
| | Phenoxyethanol | 0.2% |
| | Methylparaben | 0.2% |
| | Butylparaben | 0.2% |
| | Ethylparaben | 0.2% |
| 10 | Propylparaben | 0.2% |

EXAMPLE 9

A toothpaste within the scope of the present invention was prepared by mixing the following ingredients in amounts given by weight percentage:

| | | |
|----|---------------------------------------|---------------------|
| 15 | Ginseng (Panax Ginseng) Berry Extract | 4% |
| | Stevia | 25% |
| | Deionized Water | 23.6% |
| | Hydrated Silica | 20% |
| 20 | Sorbitol | 18% |
| | Ginseng | 4% |
| | Sodium Lauroyl Sarcosinate | 1.5% |
| | Flavor | 1% |
| | PEG-6 | 0.8% |
| 25 | Tetrasodium Pyrophosphate | 0.5% |
| | Cellulose gum | 0.5% |
| | Sodium Benzoate | 0.5% |
| | Triclosan | 0.3% |
| | Hydrogen Peroxide | 0.3% of 35% actives |

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What is claimed is:

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1. A health promoting product for human use, comprising:
ginseng berry extract.
2. The product of claim 1 further comprising one or more natural health promoting ingredients.
- 5 3. The product of claim 1 wherein said one or more natural health promoting ingredients comprises cactus fruit or cactus fruit extract.
4. The product of claim 1 wherein said product is a beverage.
5. The product of claim 1 wherein said product is a dietary supplement.
6. The product of claim 1 wherein said product is in powder form.
- 10 7. The product of claim 1 wherein said product is a topical application.
8. The product of claim 1 further comprising an ingredient selected from the group consisting of akebia stem, alisma tuber, american lovage root, ammonium seed, angelica root, angelica sinensis (Dong Quai), apple, asparagus, atractylodes rhizome, atractylodes root, bamboo leaf, banana, barley sprouts, barley, bee pollen, bell flower root, black bean, blueberry, broccoli, broomrape, burdock seed, cabbage, cactus, camellia flower, cantaloupe, carrot extract, carrot, Cassia seed, Cassia toa, Cassia toa extract, Cassia toa, Chinese date, Chinese yam, Chinese lovage root, Chinese catnip, Chinese plum, Chinese Dodder, Chinese Privet, chrysanthemum extract,
- 15 Chrysanthemum flower, chuan xiong root, chuan xiong, cinnamon bark, citrus peel, cnidium, cornel fruit, dong quai, eucommia bark, fang-feng root, fennel seed, forty knot root, ganoderma, ginger root, ginseng root, golden bell fruit, grape seed extract, grape juice, grapefruit, grapes, honeydew, jasmine flowers, ji tsau herb, Ji-ling Genseng, Jing-jie, kelp, leek seed, lemon, Lentinus edodes (Shiitake Mushroom), licorice, licorice root, lotus seed, Lotus root, lotus leaf, luffa, lycium fruit, magnolia flower, menthol leaf, mint, mongoliavine fruit, morinda root, mulberry, mushroom, orange peel, papermulberry, peach, pear, pear juice, pear juice concentrate, pearl powder, Pearl Extract, peas, peppermint, perilla, pineapple, pineapple juice concentrate, pinellia root, poria
- 20 (mushroom powder), radish, red date, reed rhizome, reed root, rice sprouts, rice, royal jelly, senega root, siler, silver flower, Soybean, Soybean extract, spinach, Stevia, strawberry, tangerine peel, tomato, vanilla, white willow bark, Wild ginger, and yeuan wu root.
- 25
- 30

9. A health promoting product for human ingestion, comprising:
ginseng berry extract.
10. The product of claim 9 further comprising one or more natural health
promoting ingredients.
- 5 11. The product of claim 9 wherein said one or more natural health promoting
ingredients comprises cactus fruit or cactus fruit extract.
12. A topical skin care application, comprising:
ginseng berry extract.
- 10 13. The skin care application of claim 12 further comprising one or more natural
health promoting ingredients.
14. The skin care application of claim 12 wherein said one or more natural health
promoting ingredients comprises cactus fruit or cactus fruit extract.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A23L1/212 A23L2/00 A61K7/48 A61K7/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A23L A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

CHEM ABS Data, WPI Data, PAJ, EPO-Internal, FSTA

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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| Y | <p>—</p> <p>-/--</p> | <p>3,7, 11-13</p> |

☒ Further documents are listed in the continuation of box C.

☐ Patent family members are listed in annex.

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Date of the actual completion of the international search

14 July 2000

Date of mailing of the international search report

26/07/2000

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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